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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/825,139

04/16/2004

Henry Buijs

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EXAMINER

VALENTIN, JUAN D

ART UNIT

PAPER NUMBER

2877

MAIL DATE

DELIVERY MODE

10/03/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/825,139

Applicant(s)

BUIJS ET AL.

Examiner

Juan D. Valentin II

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on RCE 06/27/2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14, 16 and 17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14, 16 and 17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-5, 10, 12, 14, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morris et al (US 4,647,210, hereinafter Morris) in view of Haworth et al (US 6,144,444, hereinafter Haworth) and Enejder (US 6,510,330).

As for claims 1 and 12, Morris shows a device that allows optical analysis of a confined process stream comprising an input fiber (22), an output fiber (42), and at least one optical element (30) for directing the light across a conduit section into the output fiber.

Morris does not hold the optical device in place on the process stream conduit by means of a "clip" as claimed. It is known in that art that optical instruments for measurements of a liquid in a conduit can be held in place by means of such a clip; see the clips of Enejder and Haworth. The clip of Enejder includes means (6) to measure light that passes through the liquid in the conduit, showing that it is known in the art to use such a clip for transmission measurements, and the clip of Haworth shows it is known in the art to use such a clip to hold optical fibers to direct the light to and from the conduit. It would have been obvious to use such a clip to hold the optical fibers of the test of Morris because, as discussed by Morris (column 1, line 58 through column 2, line 2), there are art-recognized advantages to using the optical fibers

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to direct the light to and from the conduit, and use of such a clip allows easy and convenient placement of the measuring instrument without having to place apertures in the conduit which can lead to leakage and which cannot be readily added and need to be filled or covered should the test instrument need to be moved or removed.

It appears that applicant's main argument from page 6 of the Remarks section of the amendment dated 06/27/2007 is that none of the prior art references cited disclose locating the optical fiber connection outside of the conduit. Morris teaches that it is known to monitor fluids in a conduit and to mount a both input and output optical fiber lens coupling junctions on a conduit. Morris further teaches that it is important and an advantage of the invention to locate the device remotely from the pipe or conduit and to make the device removable. It is obvious to those of ordinary skill in the art of optical fibers and optical measuring devices using optical fiber coupling techniques that it is a matter of design choice whether to locate an optical fiber lens coupling point inside or outside of a measurement site for the purposes of emitting and collecting measurement light. It involves only routine skill for one of ordinary skill in the art to determine the optimal location of a coupling point between an optical fiber and the optical radiation that it's emitting and/or detecting. It would have been obvious and common sense for one of ordinary skill in the art of optical fiber measuring devices at the time of the claimed invention to locate both the input and output optical fiber/lens coupling points outside the conduit in order to satisfy the disclosure of Morris which states at col. 1, line 58-col. 2, line 2:

"A particularly important advantage of the present apparatus is the positioning of the light source and analyzing equipment remote from the pipe or conduit in which the chlorine is flowing. Mounting immediately on the pipe is not required. If convenient, it certainly can be mounted on the pipe but the equipment can likewise be mounted elsewhere. The equipment incorporates a light source which must be periodically changed. For this reason, it may be appropriate to locate the light source convenient for personnel and to extend optical fibers from the lamp to the pipe or vessel. This enables a measure of adaptability and improves the mounting of the apparatus." (emphasis added)

In that by locating the optical fiber connecting points outside of the conduit, it would enable routine maintenance and/or replacement of the optical fibers and lens used to emit and collect the optical measurement light.

As in claim 2, the clamp of the Haworth reference is releasably secured; the reference refers to removing the clamp for the conduit (column 5, lines 20-21), as is the clamp of Enejder (column 4, line 4).

As in claim 3, the device of Haworth is adjustable to be securable on conduits of different cross-sectional dimensions (column 6, lines 48-50).

As in claim 4, the slot for receiving the conduit receives interchangeable conduit adapters (42, see figures 2B and 2C) to grip conduits of different external diameters.

As for claim 5, Enejder shows an arrangement for connecting an optical measuring device to a transparent conduit (3) of measuring a liquid flowing therethrough, and shows as a part of that arrangement as removable cover (2). It would have been obvious to use this type of known arrangement with a removable cover for attaching the optical measuring because, as shown by Enejder, it is a known arrangement for accomplishing the desired end of attaching an optical measuring arrangement to a transparent conduit for measuring the fluid flowing therethrough.

As relating to claim 10, Morris shows the transmitting and receiving optical fibers located on the opposite side of the conduit and the transmitted light measured; see also Enejder, with light source 4, and transmitted light detector 6 on opposite sides of the conduit.

As for claim 14, clearly the fibers must be connected to the clip by some connector means.

As in claim 16, it would have been obvious to use a wavelength of light appropriate to the test at hand; it is noted that Haworth teaches the use of light including infrared light (column 8, line 7), and, it is at least obvious to use fibers that will transmit the light being used for the test.

2. Claims 6-9, 11 13 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morris (US 4,647,210) in view of Haworth (US 6,144,444) and Enejder (US 6,510,330) as applied above, and further in view of Soodak et al (US 4,227,814, hereinafter Soodak) and Penhasi et al (US 3,527,542, hereinafter Penhasi).

As set forth above, it is known to place an optical measuring device onto a transparent conduit to measure the fluid flowing there through. Those in the art know that the details of the means to so locate the optical arrangement on the conduit can vary; there is not, and there is known not to be, and no one in the art would assume there must be, a single manner of doing this.

As in claims 6, 11, 13, 17, one known manner of doing this is to provide a slot between walls of a light transmitting material; see Soodak, which shows sliding the conduit into a slot with the light being passed through the conduit through the walls holding the conduit, and Penhasi which shows that it is known that the walls can be made of light transparent material

where they engage the conduit (claim 17), forming gripping arms to hold the conduit in place (claims 11 and 13). It would have been obvious to construct the walls of Soodak of light transmissive material as shown by Penhasi because this is a known manner of constructing such a conduit holding slot and it would better ensure a smooth optical contact minimizing distortion due to unevenness and unwanted and possibly irregularly curved surfaces in the optical path.

As in claims 7, 8, and 9, both Morris and Haworth teach that optical fibers can be used to carry the light to and from the conduit. The system thus has connectors for connecting the fibers to the rest of the instrument, both at the clip end and the source and detector ends of the fibers. Morris teaches the use of a lens (30) as in claim 7.

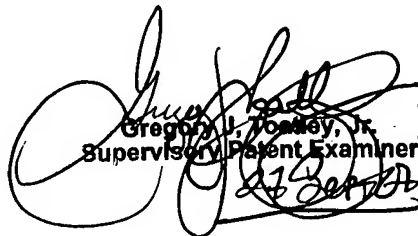
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juan D. Valentin II whose telephone number is (571) 272-2433. The examiner can normally be reached on Mon.-Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr. can be reached on (571) 272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JDVII/
Juan D Valentin II
Examiner 2877
JDV
September 21, 2007


Gregory J. Fossley, Jr.
Supervisory Patent Examiner
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